REMARKS

The application has been reviewed in light of the Office Action dated June 10, 2009. Claims 1-10, 12-15, 17-30, and 32-33 are pending in this application, with claims 1, 30, and 32 being in independent form. By the present Amendment, claims 1, 13, 17-23, 30, and 32 have been amended. Claims 11, 16, and 31 have been canceled hereby without prejudice or disclaimer. It is submitted that no new matter has been added and no new issues have been raised by the present Amendment.

Claims 1-29 and 31-33 were rejected under 35 U.S.C. § 101 as allegedly being directed towards non-statutory subject matter for being directed to a method that is not tied to an apparatus. Accordingly, these claims have been amended herby to advance prosecution.

Claims 1-4, 8-25, and 32 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 4,491,725 ("Pritchard") in view of U.S. Patent No. 6,513,025 ("Rosen"). Claim 33 was rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Pritchard in view of Rosen and U.S. Patent No. 5,613,072 ("Hammond"). Claims 5-7 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Pritchard in view of Rosen and Official Notice. Claims 26-29 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Pritchard in view of Rosen and U.S. Patent Application Publication No. 2003/0149594 ("Beazley"). Claims 30-31 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable, however, the particulars of this rejection were not put forth, except to say that they "are rejected using the same rational and reasoning" as the rejection of claims 1-29, which themselves were rejected under diverse reasoning.

Applicants have carefully considered the Examiner's comments and the cited art, and respectfully submit independent claims 1, 30, and 32 are patentably distinct from the cited art, for at least the following reasons.

Independent claims 1 and 30, for example, relate to a method for predicting a disposition of a claim based on a set of trained classifiers that have been **trained by a training system using machine learning techniques**. Accordingly, the claimed method may be used by a health care provider to **predict** the disposition of a claim, for example, including how likely the claim is to be approved, what payment would likely be provided for the claim, and a variety of other information. This disposition is **predicted based on training data that includes previously submitted claims and corresponding outcomes** so that the prediction means need not be manually reprogrammed to reflect ever-changing insurance plan requirements and payment schedules.

Pritchard, however, relates to a system by which a heath care provider can easily look up the amount of payment that should be requested for a particular patient service based on the patient's particular plan. This information is then used to help the health care provider correctly fill out the claim form. The approach of Pritchard reflects the state of health insurance in the early 1980s when doctors would charge the patient's health insurance company for the price of the services performed, with this price being at least partially determined based on the nature of the patient's insurance. For example, if a doctor charges $100 for a particular service, a first patient with a first insurance may have to pay a $10 co-pay with the insurance company being billed for the remaining $90. However, a patient with a second insurance may have to pay only a $5 co-pay with the insurance company being billed for the remaining $95. This is just one

example of why different insurance plans would be responsible for different payments for the same medical service, others are mentioned in Pritchard such as reduced fees for MEDICARE and MEDICAID. In the time between Pritchard and the instant application, much has changed in the world of health insurance. These days, the health care provider does not need to determine what to bill the patient's health insurance for a particular procedure, the health care provider simply submits a claim with the correct service code for services rendered and the insurance company sends a check for the fee that they determine is appropriate based on a very complicated and ever changing set of guidelines. That is, if the insurance company even approves the claim. Often they reject the claim.

While Pritchard was concerned with determining the correct fee to charge the health insurance company, the method of independent claims 1 and 30 are concerned with predicting the likely outcome of a claim submission. In light of the fact that the guidelines that dictate reimbursements are complex, different depending on insurance provider, geographic region, and selected plan, and subject to more than a fair amount of subjective review on the part of the insurance company, it is incredibly difficult to even attempt to identify and navigate the complex set of rules that govern reimbursement. Accordingly, the approach of independent claim 1 utilizes a novel learning approach wherein the outcome of a claim may be guessed based on training data that includes previously submitted claims and corresponding outcomes. By basing this guess on training data, complex sets of reimbursement rules need not be identified and navigated, and yet the medical practitioner can use the predictions to gauge future cash flow. While this technique might at times be less accurate than navigating the rules for any particular claim, in the arrogate, the health care provider can have an excellent idea of expected cash flow

without having to pay the considerable costs associated with having software be manually updated with the latest health insurance rules.

Rosen relates to machine learning techniques but neither Pritchard nor Rosen teach or suggest that machine learning techniques could be used to predict outcome of medical claim submissions based on prior submissions, as claimed.

Because Pritchard is not concerned with predicting the outcome of medical claim submissions, and is instead concerned with looking up the correct sum of money to bill for each service, Prichard cannot fairly be combined with Rosen to teach the cited art. Additionally, because Pritchard is concerned with determining the exact fee to charge, there is no room for determining an approximate fee and accordingly Pritchard **must** refer to the complex rules for the actual fee. Thus the independent claims actually teach away from the approach of Pritchard.

Pritchard thus does not relate to the prediction of claim submissions and rather relates to looking up a fee to charge and for this reason, even if Pritchard could fairly be combined with Rose, the combination would still fail to teach prediction of claim submissions as this does not occur in either reference. Moreover, even if the Examiner could find a piece of art pertaining to predicting claim submission outcomes, there would still be no reaching in the prior art that shows prediction of claim submission outcomes **using computer learning techniques**. While Rosen does teach computer learning techniques, this does not mean that Rosen teaches that computer learning can be applied to any conceivable problem. In fact, the application of computer learning in the instant claims is rather unique and somewhat counter-intuitive as one would not ordinarily seek to create such an estimate using computer-learning techniques. The Examiner would have to provide some suggestion in the art that points to the application of computer learning techniques

to the issue of claim submission outcome prediction, a problem that was not even contemplated in Pritchard. There is a significant difference to predicting what will be paid (as in claims 1 and 30) and knowing what to charge (as in Pritchard). Therefore the solution put forth in independent claims 1 and 30 are thus novel and non-obvious in light of the cited art.

Accordingly, independent claims 1 and 30, as amended, are patentably distinct from the cited art at least because neither Pritchard nor Rosen teach or suggest, "automatically classifying the medical claim using a set of one or more trained classifiers each of which is trained by a training system using one or more machine learning techniques to predict a disposition of the claim by the target payer using training data that includes previously submitted claims and corresponding outcomes" as claimed, at least for the reasons discussed above. Moreover, the remainder of the cited art does not teach or suggest these features and the Examiner does not contend that they do. Dependent claims 2-29 are patentably distinct from the cited art at least owing to their dependence upon independent claim 1.

Similarly, independent claim 32, as amended, is patentably distinct from the cited art at least because the cited art, taken alone or in combination, fails to teach or suggest, "automatically predicting an expected cash flow for each medical claim, or a subset of the medical claims, using a set of one or more trained classifiers that are trained by a training system using one or more machine learning techniques to predict a disposition of the medical claims by the one or more target payers using training data that includes previously submitted claims and corresponding outcomes." Dependent claim 33 is patentably distinct from the cited art at least owing to its dependence upon independent claim 32.

If a telephone interview could advance the prosecution of this application, the Examiner is respectfully requested to call the undersigned attorney.

Favorable reconsideration is earnestly solicited.

Respectfully submitted,

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By: _____

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